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# Technology and its miniature: the photograph

Sheenagh Pietrobruno

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- <sup>1</sup> The history of communications technology is in part a history of miniaturization. The book, the photograph, the stereograph, film, video, television, and the Internet can all produce representations that depict the world at a reduced scale.<sup>1</sup> The pervasive link between technology and processes of reduction has been neither extensively documented nor theorized in writings on the cultures of technology. Nonetheless, various influential theorists have noted the connection between the miniature and technology in the case of the book,<sup>2</sup> photography,<sup>3</sup> television,<sup>4</sup> technological devices<sup>5</sup> and modern warfare.<sup>6</sup> Even the world produced by computer programming has been associated with the miniature. For Paul Edwards, “the computer contains its own world in miniature ... In the microworld, as in children’s make-believe, the power of the programmer is absolute.”<sup>7</sup> These references, both thought-provoking and often fleeting, do not broach the relation between minutia and technology in a systematic or comprehensive manner. The issue of the miniature is here brought to the fore to demonstrate its centrality within technology and culture through the example of photography. A key argument underlies this study: the photograph can be viewed as a miniature in terms of its status as a minute visual reproduction and hence distortion of the exterior world that the camera attempts to capture. That the photograph seizes images of the world to render them miniatures is demonstrated through the history of the medium and through the meanings evoked by its process of reduction. The significance of the photograph as a visual and material miniature is viewed against the backdrop of the multiple meanings evoked by the miniature through its status both as a metaphor and as tangible object.
- <sup>2</sup> To foreground the claim that the photograph is a miniature embodying the array of meanings associated with the miniature, the arguments unfold in stages. The first describes the way that miniatures as physical objects are also metaphors connected in meaning to the interplay between scale and the human body. The second traces, primarily in the western European historical context and the global digital era, the multiple and even contradictory connotations of the miniature in terms of the

production, use and enjoyment of miniature objects. The third provides a history of photography through the prism of the photograph's link to the scale of the miniature. By drawing upon the observations of Walter Benjamin, Susan Sontag, Graham Clarke and Beaumont Newhall, the final section illustrates the way that the photograph is imbued with the multiple meanings evoked by the miniatures of past and contemporary eras.

## Miniatures, metaphors and the human body

- 3 Miniatures can be defined as objects that offer drastically scaled-down representations and hence distorted visual depictions of the actual world. The process of miniaturization enables the large to be enclosed and contained within the small. Consequently, miniatures let us grasp the cosmos in our hands and seize it with our eyes.<sup>8</sup> As the human body has provided our essential means of apprehending and beholding scale, the criteria for what constitutes a miniature is also judged in relation to our bodies.<sup>9</sup>
- 4 The miniature is also a metaphor. The impulse to conceptualize in metaphors is an inherent feature of our use of language. Linguist George Lakoff and philosopher Mark Johnson argue on linguistic grounds that metaphors underlie most of our ordinary conceptual systems, such as thought processes and the nature of experiences.<sup>10</sup> Generally, we are unaware of how deeply metaphors structure our conceptual universe. Metaphors, for one, enable us to forge space. The visual field, for instance, is transformed into a receptacle through the word "field" itself as well as through the prepositions we use to speak about it: expressions such as "to have something in sight" or "out of sight" give the impression that we can enter a visual space that holds the objects we see within it.<sup>11</sup> Metaphors, according to Lakoff and Johnson, also structure the physical world by rendering it distinct and confined even when it may not consist of clear borders: "Human purposes typically require us to impose artificial boundaries that make physical phenomena discrete just as we are: entities bounded by surface."<sup>12</sup> Metaphors, therefore, enable us to fashion and demarcate spatial dimensions of scale by drawing distinctions between the small and large through terms such as "miniature," "miniaturization" and "Lillipution" as well as "giant" and "gigantic."
- 5 The idea that a miniature can be simultaneously a physical object and a metaphor appears to be contradictory. Nonetheless, as metaphors are grounded in the physical world, most notably the human body, they are inextricably linked to the material and the concrete. The "miniature" can therefore be viewed as an actual object that takes shape and is conceived through the metaphorical use of language. Paul Ricoeur identifies, for instance, the role that the body plays in our understanding of metaphor. In light of his perspective that a "picturing function" underlies metaphorical meaning, Ricoeur proposes that the expression "figure of speech" is grounded in our perception of the body as figure. He equates the ways that the human body shifts its positions and twists and turns with how metaphors alter accepted meanings through the specific ways that they change and twist words and phrases. Through figures of speech such as metaphors, language becomes furnished with a "quasi bodily externalization" that renders abstract concepts more material and physical.<sup>13</sup> Lakoff and Johnson have further noted how metaphor is rooted in the tangible.<sup>14</sup> The language of metaphors arises and is shaped into meaning through physical experience governed by the dictates of culture. Metaphors are grounded in the material, specifically the body.

## Miniatures and their meanings

- 6 The miniature, which assumes many shapes, is part of visual culture; it is a visual representation and a material artifact whose significance and connotations vary in different cultures and contexts. This perspective on the miniature within photography draws from the “material turn” in cultural studies (as well as anthropology), which has emphasized the importance of the social meaning of objects.<sup>15</sup> In Western nations, minute objects have typically been a part of the everyday experience of the child; toys offer reduced and distorted versions of the material world. From the fifteenth century onward, miniature books, for instance, became primarily artifacts made for children, adding to the association of the child with processes of miniaturization.<sup>16</sup> As Walter Benjamin observes, “Surrounded by the world of giants, children use play to create a world appropriate to their size.”<sup>17</sup> Flemish artist Peter Bruegel’s painting *Children’s Games* (1560), which has been interpreted as an encyclopedia of children’s games,<sup>18</sup> epitomizes the connection between the world of the child and the miniature. This painting offers minute images of two hundred children playing over eighty games. Similar diminutive representations of children playing games adorned the margins of at least eight sixteenth-century Ghent-Bruges manuscripts produced prior to Bruegel’s painting.<sup>19</sup> Commonly associated with domesticity and the home, children’s toys such as dollhouses and tiny china tea sets are also relegated to the sphere of the feminine. Before becoming a mass-produced toy for children in the nineteenth and twentieth centuries, the dollhouses of the eighteenth century were items with which only girls from aristocratic and middle-class families could play. By playing with dollhouses, the daughters of these families in the eighteenth century learned about the duties of homemaking and about the household management of the great homes they would assume as adults.<sup>20</sup> The small is further associated with femininity through miniature portraiture. The public donning of portrait miniatures from the eighteenth century onward was limited to women. Men could wear tiny portraits of their loved ones only concealed under their clothing since any public display could affect their masculine image.<sup>21</sup>
- 7 Miniatures are also souvenirs, essentially diminutive mementos or keepsakes that travelers bring back home to capture the memory of their holidays. National and urban landmarks are remodeled into scaled-down versions as voyage reminders – for example, tiny replicas of Paris’s Eiffel Tower and snow-shaker glass baubles featuring Istanbul’s mosques. These artifacts reduce cities to one or a few miniscule landmarks that we can twiddle between our fingers. Roland Barthes notes, for instance, that “Tourist folklore” shrinks Paris to its tower and its cathedral.<sup>22</sup> The diminutive representations embodied in toys and souvenirs make us feel close to the actual world, as we can hold in the palm of our hands or get physically close to objects whose real-world equivalents often greatly surpass our physical size. Wearing cherished miniature portraits also gives their owners a sense of being near to and taking possession of the loved ones who the minute paintings capture.<sup>23</sup> Being able to acquire and hold all kinds of miniatures gives us the impression of retaining what they represent in the actual world. These miniatures, as emblems of childhood, femininity and travel memories, coincide in their summoning of intimacy and possession.



**FIGURE 1: A “MINIATURE SNAPSHOT” OF THE EIFFEL TOWER, PARIS, FRANCE (C. 1920), COURTESY OF THE COLLECTION OF JOHN TOOHEY.**

- 8 With the rise of microtechnology, miniaturization has undergone a metamorphosis. Mechanisms of reduction have transformed military weapons such as cruise missiles and everyday information gadgets –mobile phones, iPhones, Blackberries, palmtop computers and mini laptops – into powerful machines. Commenting on how technology has altered the status of the tiny beyond the sphere of the feminine in the contemporary context, Donna Haraway writes, “The nimble fingers of ‘Oriental’ women, the old fascination of little Anglo-Saxon Victorian girls with doll’s houses, women’s enforced attention to the small, take on quite new dimensions in this world.”<sup>24</sup> The gadgets that have become essential to our lives – smart phones, iPhones, and mini screens – enable us to have the world at our fingertips. As we grasp and use these technological objects, we feel that we have a certain degree of control over the exterior realm that surrounds us. Microtechnology has converted miniaturization into an instrument of command. As the attributes of authority and control have been stereotypically associated with the masculine, the miniature in the age of high technology moves from its traditional feminine and domestic domain to that of the masculine. Furthermore, digital handheld devices such as the cameras in iPhones and Blackberries reproduce images of the world that become miniatures when viewed through their tiny screens. Micromachines not only offer diminutive and distorted representations of the world through their tiny screens,<sup>25</sup> as do traditional toys and souvenirs, but also make available a universe of information for us to access, possess, and handle. These devices become toys of mastery in which the immensity of the world can be held in the palm of our hands.
- 9 Haraway’s claim that miniaturization prior to the rise of microtechnology was primarily relegated to the feminine<sup>26</sup> is an assertion that possibly pertains generally to miniaturization in the Western context as well as to stereotypes that the West once held (and may still hold) of “exotic” cultures and their peoples, such as “Oriental” women. The miniature has been connected to the masculine in contexts other than that of microtechnology. Turkish miniature paintings of the Ottoman Empire, which began with



the conquest of Istanbul in 1453, emulate to a certain extent the masculine world. The subject matter of the Turkish miniature distinguished this ancient art from parallel forms found in Persia. The Turkish miniature cast aside the romantic, fanciful, enchanting and whimsical style and content of the Persian heritage in favor of a masculine tradition.<sup>27</sup> The miniature art of Turkey during the Ottoman era primarily focused on the subject of power, as displayed through governance, war and the maintenance of social peace as well as through the authority of the male rulers, the sultans. The art patrons of the Muslim world were wealthy, influential men from the court and were leading public figures.<sup>28</sup> Miniatures, costly paintings that could be financed only by elite men, emulated their powerful status and exhibited the dominance of the state and the men of authority.<sup>29</sup> The overriding theme of power was depicted through masculine iconography, in which male figures and concerns predominated.<sup>30</sup> The largest numbers of miniatures celebrated their royal male patrons through portraiture of the sultans and other important figures and by chronicling male prowess in depictions of battle scenes as well as hunting and sporting events.<sup>31</sup>



**FIGURE 2: A “MINIATURE SNAPSHOT” OF SÜLEYMANIYE MOSQUE, ISTANBUL, TURKEY (C. 1930), COURTESY OF THE COLLECTION OF JOHN TOOHEY.**

- 10 Because of the expertise and discipline that are needed to produce small objects, European miniature painting could also connote mastery, a sensation not stereotypically associated with femininity in patriarchal worldviews. The mastery of European miniatures was one of artist technique and prowess that was also shared by non-European traditions. Persian miniature paintings produced by master artists from the fourteenth to the nineteenth centuries are marked by a perfectionism in which “every detail is as perfect as human skill can make it.”<sup>32</sup> Throughout the Middle Ages, monks adorned the pages of manuscripts with elegant and exquisite illuminations and bordered their artistry with a red lead-based pigment known as “minium,” from which the term “miniature” was eventually derived. John Bradley notes that minium’s “connection with portraiture and other pictorial subjects on a small scale is entirely owing to its accidental confusion by French writers with their own word *mignon* and so with the Latin *minus*.”<sup>33</sup> The miniatures that embellished manuscripts were nonetheless often miniature in scale

as a result of the small size of the pages on which they appeared. An example is the portrait “The Martyrdom of St. Anthimus,” measuring 7 inches in height, which decorates a Byzantine manuscript by Simeon Metaphrastes titled *Lives of Saints*, dated to the eleventh or twelfth century.<sup>34</sup> Beginning in Elizabethan England, miniature painting became an art of portraiture. These diminutive portraits were intricate watercolors painted on parchment (or vellum), paper, porcelain and ivory that demonstrated the finesse of the artist.<sup>35</sup> With the advent of photography in the nineteenth century, the appeal of miniature art was drastically reduced.<sup>36</sup>

- 11 The historical development of miniature craftsmanship in various western European nations, including Germany, Holland and England, sheds further light on the relation between mastery and the miniature that preceded digital technology. The ability of artists and artisans to skillfully replicate larger objects in intricate detail on a tiny scale demonstrated their command over their craft and the actual world of objects. Artisans displayed miniature versions of their wares, including minute objects made of silver, china and glass as well as small pieces of furniture.<sup>37</sup> The Protestant Reformation also contributed to the development of small objects. This religious movement rendered obsolete the work of numerous artists commissioned to make large-scale works for the church. These artists began instead to produce smaller craft items and art objects for domestic consumption.<sup>38</sup> Toys were therefore not initially created by toy manufacturers but were produced by an array of craftsmen, including woodcarvers and pewterers.<sup>39</sup> Toy making did not become a distinct industry until the nineteenth century.<sup>40</sup> The production of toys was not originally geared to children’s play but enabled the craftsmen in guilds to exhibit their mastery and skill by producing miniature versions of their work. The manufacture of these first toys conformed to the regulations of guilds, stipulating that each guild could produce handiworks only within the confines of its trade.<sup>41</sup> As Benjamin writes, “You could find carvings of animals at the woodworker’s shop, tin soldiers at the boilermaker’s, gumresin figurines at the confectioners, and wax dolls at the candlemaker’s.”<sup>42</sup> In his seventeenth-century account of artists and craftsmen, Christoff Weigel wrote of the Germany of his day, “There is hardly a trade in which the things usually made big are not often copied on a small scale, as toys.”<sup>43</sup> As Fritzsche and Bachman note, these small replicas were primarily works of art rather than toys.<sup>44</sup>
- 12 As markers of wealth, the miniature objects that filled the lavish dollhouses and cabinet houses of the Netherlands also connoted the power and mastery of their owners. The earliest known dollhouse, also referred to as a “baby house,” was built in 1557-58 for Albert V, Duke of Bavaria. This house, which was constructed as a perfect miniature of the Duke’s lavish four-story home, was furnished with tiny replicas of furnishings and an array of ornate and exquisite domestic objects. The Duke of Bavaria’s “baby house” was built and furnished with the participation of at least fourteen guilds.<sup>45</sup> The miniature world produced by dollhouses was initially associated with the child and femininity to a lesser extent than it would later be. Designed as an adult plaything, the Duke of Bavaria’s “baby house” and other luxuriant houses that would be built throughout the centuries, including the Dutch cabinet houses, were created to convey and celebrate the great wealth of their owners and hence their power and dominance in society.<sup>46</sup> The Dutch cabinet houses of the seventeenth and eighteenth centuries were constructed with architectural sophistication and furnished with exquisite miniature domestic objects often done in gold and silver.<sup>47</sup> In these centuries, the cabinet houses featured in Dutch homes, for instance, were also often precise replicas of the floor plans and furnishings of

actual homes.<sup>48</sup> As lavish dollhouses and cabinet houses were scaled-down exact replicas of actual homes, these houses and their miniature objects enabled their owners to grasp their actual home as a visual and material microcosm. The miniature objects that furnished dollhouses and cabinet houses encapsulated the wealth and power of their owners and hence their mastery over their contemporary world.

- 13 In today's context, miniature art continues to embody a sense of mastery. An example is the work of microminiaturist Willard Wigan, creator of the world's smallest sculptures. Sculpted by the human hand, his creations seem to be a product of microtechnology; he works within a scale normally accessible only with specific technologies specializing in the small, namely nanotechnology and microsurgery. The force of Wigan's art, therefore, lies in how he challenges technology by uncovering the technical (and artistic) power of the human. His microscopic creations, which are often so small that they require high-power magnification to be rendered visible, seem to defy the limits of human ability: his sculptures are infinitesimal. Carving tiny materials such as toothpicks, sugar crystals and grains of sand and rice, he casts sculptures in unimaginably small places, such as on the tip of an eyelash, in the eye of a needle or on the top of a pin.<sup>49</sup> Wigan relates how his undiagnosed learning disability made him a source of ridicule by his first grade teacher. His artistry of creating tiny sculptures began in childhood as a means to empower his belittlement: he states that "people had made me feel small so I wanted to show them how significant small could be."<sup>50</sup> Wigan's bewildering dexterity in producing infinitesimally small sculptures and the circumstances that fueled the impulse to create them reveal the power and mastery contained in fashioning tiny replicas of the world.
- 14 Gaston Bachelard, a philosopher who has explored miniaturization, envisions it as a means to capture, hold and dominate the world around us. Miniaturization, mastery and possession become interlaced in Bachelard's vision of how the vast is contained by the small. The mechanism of miniaturization is illuminated in his *The Poetics of Space*. To demonstrate how the minuscule and the immense are harmonious in thought, he provides a simple but cogent illustration. When one looks out at the horizon, distance creates miniatures. The miniatures on the horizon are not actually minute but become tiny through the mind's eye. The imagination captures this immensity and reduces it to a little world that can be more easily possessed, controlled and dominated.<sup>51</sup> As the physical world is rendered small so that it can be more fully retained, values become both compressed and enhanced. To understand how the gigantic is contained within the miniature, one must go beyond the logic of "platonic dialectics," which distinguishes large from minuscule, to the "dynamic virtue of miniature thinking," which enables the imagination to encounter the massive within the small.<sup>52</sup> "Miniature thinking" moves the daydreaming of the imagination beyond the binary division that discriminates large from small. These two opposing realms become interconnected in a spatial dialectic that merges the mammoth with the tiny, collapsing the sharp division between these two spheres.<sup>53</sup>
- 15 Photography can materially capture the immensity of the world in miniature. Photos, which are tiny distorted reflections of the world, are not simply two-dimensional images but three-dimensional objects. They are in material terms small artifacts that offer scaled-down representations of the world. Nonetheless, they do not simply produce mirror images. As virtual images, photographs can be understood in terms of Anne Friedberg's analysis of virtuality. Photos cannot be positioned within the structure of "original" and "copy" because they are not products of clear mimetic relations. Instead,



they constitute a “transfer – more like metaphor – from one plane of meaning and appearance to another.”<sup>54</sup> In this context, photographs do not mimic “reality” but rather mark a shift in scale that is generally reductive.

## Miniaturization and the photographic miniature

- 16 Various instances in the history of photography attest to the way that this technology could be viewed in part as a process of miniaturization and how photos can be perceived as miniscule images. The daguerreotype is one such instance. With this form of photograph, created by Louis Daguerre in 1839, the image is directly exposed upon a mirror surface of silver-covered copper. In this method, the copper plate is first lined with light-sensitive chemicals and then exposed to light, resulting in a positive image on the plate.<sup>55</sup> The daguerreotype is in fact a negative image that appears positive in proper light as the mirrored surface of the metal reflects the image. Daguerreotypes were always produced as miniatures. In their earliest stages, they offered great visual detail. The lens produced intricate pictures, and the smooth silvered plates documented these minute images with such reliability that they were scrutinized and pored over through magnifying glasses. These photographs composed of minutia asked the viewer to explore them closely. Beaumont Newhall suggests that it is because daguerreotypes could create highly detailed images that they were produced in small sizes and wrapped in locket.<sup>56</sup> (Economic reasons also contributed to their diminutive size.) Furthermore, their size enabled them to be stowed in secret. For instance, when daguerreotypes were used for pornography in the luxurious manner that characterized the 1850s, they were hidden in tiny places. Examples of these miniscule hiding spots include underneath watch covers that opened with concealed springs or within the lining of the lids of snuff boxes.<sup>57</sup> The dimension of daguerreotypes enticed their beholders to grasp them and hold them near to their eyes.<sup>58</sup> Because of its visual detail and intricacy, the daguerreotype was described by *La Gazette* in 1837 as exhibiting “an ‘extraordinary minuteness.’”<sup>59</sup> The miniature size of the daguerreotype did not result from a technical restriction since they could be made as large as 16 by 20 inches.<sup>60</sup>
- 17 The rise of the daguerreotype and photography led to the demise of miniature portraiture as an art and commercial practice. The small size of photographs is an element of this medium’s history, particularly in regards to a wider aesthetics of representation, namely that of painting. In the first decades of the advancement of photography, this new technology literally displaced the painting of miniature portraits, an art form that essentially vanished.<sup>61</sup> Oliver Wendell Holmes, an inventor of a type of stereoscope, praised the daguerreotype’s power to create images that not only mimicked the artistry of miniature paintings but also outshone them in their microscopic and exquisite subtleties:
- 18 No Century of Inventions includes this [the daguerreotype] among its possibilities. Nothing but the vision of a Laputan, who passed his days in extracting sunbeams out of cucumbers could have reached such a height of delirium as to rave about the time when a man should paint his miniature by looking at a blank tablet, and a multitudinous wilderness of forest foliage or an endless Babel of roofs and spires stamp itself, in a moment, so faithfully and so minutely, that one may creep over the surface of the picture with his microscope and find every leaf perfect, or read the letters of distant signs, and see what was the play at the “Variétés” or the “Victoria,” on the evening of the day when

it was taken, just as he would sweep the real view with a spy-glass to explore all that it contains.<sup>62</sup>

- 19 The ambrotype, which came into use in the 1850s and employs a wet collodian process, replaced the daguerreotype in popularity. Since ambrotypes were made on pieces of glass, they were less expensive to produce than metal daguerreotypes. Ambrotypes again created small representations, particularly portraits. Following in the tradition of the daguerreotype, they were also set in miniature picture frames and decorative locket.<sup>63</sup> The wet collodian process, first applied to photography by Frederick Scott Archer, who published an account of it in 1851, involved numerous chemical treatments of a glass plate that had to be completed both immediately before and after it was exposed. Early photography was therefore cumbersome: because the wet collodian process was to be completed in a few minutes, the photographer needed to carry the chemicals and darkroom with him; and cameras, which were built large in order to fit the glass plates, needed to be mounted on a tripod, which the photographer also had to bring with him.
- 20 The wet plate technique introduced in the 1850s radically changed portrait photography by making it possible to produce an unlimited number of prints from a single negative, which were usually made on albumen paper. The daguerreotype created a unique image that could not be reproduced. Around the time that the daguerreotype was invented, Hippolyte Bayard in France and Fox Talbot in England had managed to create a negative that could be used to reproduce a potentially endless number of copies.<sup>64</sup> Hence, with the possibility of replication, photography became cheaper and more popular. Small portraits were attached to cards roughly only 2 by 3 inches, a format called the *carte-de-visite*, which was in fact a calling card. In the 1850s André-Adolphe-Eugène Disdéri was one of the photographers who popularized these minuscule and inexpensive portraits in the format of the *carte-de-visite*, contributing to the commercialism and vulgarization of portrait photography. In the 1850s and 1860s miniature portraits of a more artistic quality than those of the commercial *carte-de-visite* were also produced in a small format, an example being the work of Gaspard-Félix Tournachon, or “Nadar,” who created portraits that were affixed to pasteboard roughly the dimension of a postcard, referred to as the “cabinet” size.<sup>65</sup>
- 21 The technological shift from the wet plate process to dry plates and eventually to film enabled photography to become a widespread amateur pastime. The popularity of photography empowered anyone who was in possession of a camera to capture the immediate world as miniature images. In the 1870s development of the dry plate process enabled photographers to use prepared plates that kept their sensitivity over an extended period and could be developed a long time after their exposure. These prepared plates, which were sold in packages, liberated photographers from the burden of carrying the darkroom and a tripod with them. The plates, which were loaded into the camera, became smaller, with quarter plates, for instance, being 3.25 by 4.25 inches.<sup>66</sup> Cameras could simply be held in the hand.<sup>67</sup> Like the photographs they took, cameras had also become miniature objects. In 1888 George Eastman, the founder of Kodak, produced a camera that used dry plates. These first cameras were issued with film composed of gelatine-coated paper. When the film had been used up, the entire camera had to be sent to the Kodak company for the film to be developed because the process of removing the gelatine from the paper was highly delicate. Once developed, the camera was then reissued to the customer with new film. The early cameras produced minute photographs that were, for just a few years, circular in shape. In 1894 Eastman patented a type of film

that substituted the gelatine-coated paper with celluloid, thus eradicating the intricate process of removing the gelatine. This film was also rolled up with black paper, which meant that it could be taken out of the camera in daylight. Consequently, the film could be developed without sending the entire camera to the company.<sup>68</sup> In his analysis of the miniaturization of devices, William J. Mitchell points out how the shift from glass to celluloid further reduced the size of the camera: “The size of the negative controlled the dimensions of the optical system and the film transport mechanism. Shrinking film formats (and a move from glass to celluloid) accomplished a certain amount of miniaturization.”<sup>69</sup> Eastman’s Kodak camera, specifically the Brownie in 1900, enabled photography to become a cheap and popular recreation, as anyone could capture his or her everyday life in photos.<sup>70</sup> These instances were seized in “snapshots,” a reference to photos that are “shot” spontaneously, quickly and generally without a journalistic or artistic goal. Snapshots, which come in standard shapes, either rectangular or square, and in a size that is small enough to fit in a pocket or wallet, again provide a diminutive representation of the world. The past and present lives of countless people dispersed throughout the globe have been and continue to be captured in these “Kodak moments,” reflecting how photography can produce slices of the world as miniature artifacts.

- 22 In reaction to the rise in amateur photography, which was jeopardizing the livelihoods of professional photographers, there developed in the late 1890s a commercial photographic format often referred to as a “miniature snapshot” or a “miniature view” that became through these names explicitly associated with the small. (This format was also referred to by other names that were not necessarily connected with the minute, specifically “*vue artistique*,” “authentic view” and “camera study.”) The photos produced in this format, which served primarily as travel souvenirs, were packaged in pocket-sized paper wallets containing sets of photos in quantities ranging from six to twenty-four. The inexpensive Eastman camera offered tourists the opportunity to take successful snapshots of their everyday holiday moments. Meanwhile, amateur photographers found that with their popular camera they could take only disappointing photographs of scenery, landscapes, and landmarks. Therefore, photographers seized upon this business opportunity and produced professional miniature snapshots of the great cities and tourist attractions of the world,<sup>71</sup> such as Paris’s Eiffel Tower (Figure 1), Istanbul’s Süleymaniye Mosque (Figure 2), and New York’s Times Square (Figure 5). These “miniature snapshots” often depicted real-world attractions in ways that made them appear unreal and even toy-like. For instance, the “miniature snapshot” of Ouchy, in Switzerland (Figure 3), transforms this popular lakeside resort into a still and static model play-land; the “miniature snapshot” of Bruges, in Belgium (Figure 4), gives this city a fairytale-like serenity. These photographs, therefore, are minute artifacts not only because of their size but also because their composition and style turn cities and natural settings into places that resemble children’s toys and their magical worlds. The “miniature snapshot,” according to John Toohey, eventually became obsolete as more inexpensive colour processes were developed in the 1960s.<sup>72</sup> They were replaced by folding booklets of the same price or lower comprised of less professionally printed “authentic colour” souvenir shots.



**FIGURE 3: A “MINIATURE SNAPSHOT” OF OUCHY, A LAKESIDE RESORT NEAR LAUSANNE, SWITZERLAND (C. 1930), COURTESY OF THE COLLECTION OF JOHN TOOHEY.**



**FIGURE 4: A “MINIATURE SNAPSHOT” OF BRUGES, BELGIUM (C. 1920), COURTESY OF THE COLLECTION OF JOHN TOOHEY.**

## Embodying the meanings of the miniature in the photograph

- 23 The meanings evoked by the photograph as miniature are reminiscent of other small objects: the feelings of control and possession experienced when using micromachines such as laptops and cellular phones, the demonstration of mastery exemplified through miniature art and craft, and the intimacy and sense of possession occasioned by toys and souvenirs. By capturing the world in the small, the photograph shrinks the immensity of the universe and all its objects, people and places, rendering it more easily contained, possessed and owned. A vast landscape becomes possible to hold; mammoth monuments can be put in our pockets. By reducing the magnitude of the visual field to the tiny, photographs enable us to limit and control its seemingly endless expanse. This association of photography with miniaturization and control has been previously noted but not extensively elaborated upon in terms of the history of the medium. In “A Small History of Photography,” Walter Benjamin writes, “In the final analysis, mechanical reproduction is a technique of diminution that helps men to achieve a control over works of art without whose aid they could no longer be used.”<sup>73</sup> Susan Sontag likewise regards photographs as miniature representations of the world that grant their creators a certain level of power: “To collect photographs is to collect the world.”<sup>74</sup> She describes photographs as “miniatures of reality” and alludes to the way that the photograph – among other attributes such as being a social ritual or a means to ward off anxiety – is also a way to attain power. “To photograph,” Sontag writes, “is to appropriate the thing photographed. It means putting oneself into a certain relation to the world that feels like knowledge – and therefore like power.”<sup>75</sup> Graham Clarke also equates the miniaturizing potential of photography with power and possession. The photograph orders reality and exerts an absolute control by confining the viewer to the frame of the photograph.<sup>76</sup> The photograph not only arranges the space of the object of vision but also tampers with its scale. The “reality” that is reflected in the photograph undergoes a metamorphosis through its reduction in size. He writes of the photograph, “Invariably it reflects the world it observes according to principles of one-point perspective, but it does so in terms of the world in *miniature*.”<sup>77</sup> Cities, landscapes and landmarks, for instance, are scaled down to images that are often no more than 6 by 4 inches, which for Clarke signals again the power of photography to control vision as well as its ability to possess what it visually captures.<sup>78</sup>





**FIGURE 5: A “MINIATURE SNAPSHOT” OF TIMES SQUARE, NEW YORK, UNITED STATES (c. 1920), COURTESY OF THE COLLECTION OF JOHN TOOHEY.**

- 24 Photographs also elicit intimacy, as we seem to be near to or even present in the universe that appears in a tiny form before our eyes; photos bring people, things and events far removed from us in time and place into physical and temporal proximity. They make us feel so close that it seems as though we could “touch” the worlds they reduce in size. For instance, beholding the minute image of the gigantic vista of Mount Ranier and its surroundings (Figure 6), we may experience a sense of being part of this landscape and even caressing with the eye and hand this vast terrain, which spans a colossal mountain peak, a dense and expansive forest below, the water of the lake and the grass beside it. Beaumont Newhall emphasizes the palpability that photographs can convey in their recording of a reality that is basically illusionary: “Unconsciously we are convinced that if we had been there, we could have seen it exactly so. We feel that we could have touched it, counted the pebbles, noted the wrinkles, and found it identical.”<sup>79</sup> As a miniature and hence distorted representation, the photograph radically reduces the size of the visual field, enabling its beholders to capture and dominate what it visually seizes and to experience a closeness with the photographed image.





**FIGURE 6: A “MINIATURE SNAPSHOT” OF MOUNT RANIER, WASHINGTON STATE, UNITED STATES (C. 1920), COURTESY OF THE COLLECTION OF JOHN TOOHEY.**

- 25 From the daguerreotype to the ambrotype, *carte-de-visite*, and snapshot, developments in photography illustrate that they visually and materially reproduced the world in miniature dimensions. With the proliferation of photos taken, stored and collected on mobile devices, including iPhones and Blackberries, the photo in the digital era continues its tradition as a miniature. The photograph joins a collection of miniature objects from past and present contexts that capture images of the world in distorted dimensions. The meanings that can be bestowed upon this array of miniatures also apply to the photograph and its diminutive scale when viewed through the perspectives of Walter Benjamin, Susan Sontag, Graham Clarke and Beaumont Newhall. The connotations bestowed upon miniatures are incongruous: tiny objects yield opposing attributes, and despite conveying an intimacy associated with stereotypes of femininity and domesticity as well as childhood and holiday memories, the miniature also brings forth sensations of possession, power, mastery and control. The photograph, which reduces the size of the world it captures to the minuscule, embodies these contrasts.

## NOTES

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## ABSTRACTS

The history of communications technology is in part a history of miniaturization. The issue of the miniature is here brought to the fore to demonstrate its centrality within technology and visual culture. The photograph can be viewed as a miniature in terms of its status as a minute visual reproduction and hence distortion of the exterior world that the camera attempts to capture. That the photograph seizes images of the world to render them miniatures is demonstrated through the history of the medium and through the meanings evoked by its process of reduction. The significance of the photograph as a visual and material miniature is viewed against the backdrop of the multiple meanings evoked by the miniature through its status both as a metaphor and as a tangible object.

## INDEX

**Mots-clés:** photography and miniaturization; miniature; scale and media; technology and science

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